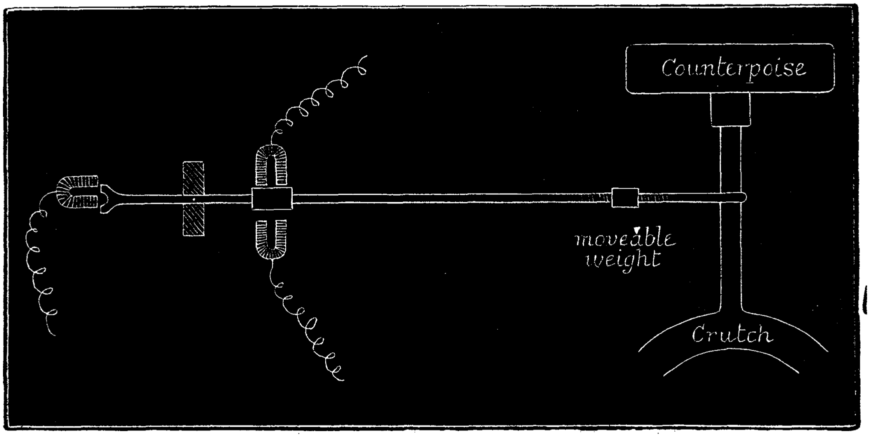
1888MNRAS..48..336R

Note on a Simple Method of applying Electrical Control to the Driving Clock of an Equatorial. By A. C. Ranyard, M.A.

As considerable attention is at present being paid to the methods of controlling driving clocks of equatorial telescopes by the motion of a seconds pendulum, I think that a notice of a simple addition which I am having made to my driving clock may be of interest. I am getting rid of my old driving wheel, and propose to substitute a driving sector of 3-foot radius in its place. This gears into an endless screw driven, as in Sir Howard Grubb's clock, by an axis on which is an insulated wheel with rubbers nearly similar to the contrivance described by Lord Crawford and Dr. Gill in the *Monthly Notices* for November 1873. Instead of the epicycloidal accelerating and retarding wheels used by Sir H. Grubb, I propose to make use of the instantaneous current to act upon magnets which move a small weight attached to the end of a lever backwards or forwards from one side to the other of the fulcrum of the crutch which rubs upon the governor disc. When the little weight attached to the lever is on one side of the fulcrum it decreases the pressure of the crutch, and accelerates the motion of the governor, and when drawn to the other side it increases the pressure and retards the motion of the clock. When the clock is going correctly a magnet draws the lever to the central position over the fulcrum. My governor is similar to that figured by Mr. Common in the *Memoirs*, in describing the mounting of his great 37-inch reflector.



If it is preferred, the height of the fulcrum with respect to the rubbing disc of the governor can be altered by moving a lever attached to an adjusting screw supporting the fulcrum. But the weighted lever above described gives an additional means of adjustment, as a small nut running on a screw, and acting as a counterpoise weight, may be moved upon the lever, or the position of the horseshoe magnets may be moved within certain limits, either towards or away from one another, or up to or away from the centre of motion of the lever.

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Observations of Sappho, made at the Cambridge Observatory by Mr. A. Graham with the Northumberland Equatorial and Square Bar-Micrometer.

(Communicated by Professor J. C. Adams.)

	Greenwich Mean Time.	Apparent R.A.	Apparent Decl.	Reduction to Geoc. Place in R.A.	Reduction to Geoc. Place in Decl.	Compared Star.	No. of Comps.	Correction of Ephemeris in R.A.	Correction of Ephemeris in Decl.
		h m s	° ′ ″	s	″			s	″
1888, April	14·39868	13 18 25·38	−12 8 0·05	−0·12	+4·66	*a*	10	+6·69	−34·34
	·39868	13 18 25·55	−12 7 57·53	−0·12	+4·66	*b*	10	+6·86	−31·82
	16·40366	13 16 34·05	−11 50 42·34	−0·11	+4·68	*c*	1	+6·52	−31·55
	·40366	13 16 34·57	−11 50 43·06	−0·11	+4·68	*d*	1	+7·03	−32·27
	18·39188	13 14 45·35	−11 33 29·92	−0·11	+4·65	*e*	10	+6·82	−31·98
	30·46232	13 4 35·66	− 9 50 50·03	+0·04	+4·66	*f*	5	+6·64	−35·49
	·46536	*g*−0 54·84	*g*+4 23·16	+0·04	+4·66	*g*	4		

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